

This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a Minor, Industrial permit. The stormwater discharge results from a petroleum bulk terminal operation. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-00 et seq.

1. Facility Name and Mailing Address: Kinder Morgan Southeast Terminal LLC
Newington – 2
1100 Alderman, Suite 200
Alpharetta, GA 30005
Facility Location: 8206 Terminal Road
Lorton, VA 22079
County: Fairfax
Facility Contact Name: Richard Krejci
Telephone Number: 770-751-4157
2. Permit Number: VA0001988
Expiration Date: 27 March 2010
Other VPDES Permits: Not Applicable
Other Permits: Registration Number 70234 – DEQ Air Permit
VAD000607986 – RCRA (Hazardous Waste)
E2/E3/E4 Status: Not Applicable
3. Owner Name: Kinder Morgan Southeast Terminal LLC
Owner Contact/Title: Richard Krejci / Director of Field Operations
Telephone Number: 770-751-4157
4. Application Complete Date: 17 November 2009
Permit Drafted By: Douglas Frasier
Date Drafted: 25 January 2010
Draft Permit Reviewed By: Alison Thompson
Date Reviewed: 15 February 2010
Public Comment Period: Start Date: 18 March 2010
End Date: 16 April 2010
5. Receiving Waters Information: See **Attachment 1** for the Flow Frequency Determination.
Receiving Stream Name: Accotink Creek, UT
Drainage Area at Outfall: 0.08 square miles
River Mile: 0.35
Stream Basin: Potomac River
Subbasin: None
Section: 7
Stream Class: III
Special Standards: b
Waterbody ID: VAN-A 15R
7Q10 Low Flow: 0.0 MGD
7Q10 High Flow: 0.0 MGD
1Q10 Low Flow: 0.0 MGD
1Q10 High Flow: 0.0 MGD
Harmonic Mean Flow: 0.0 MGD
30Q5 Flow: 0.0 MGD
303(d) Listed: No
30Q10 Flow: 0.0 MGD
TMDL Approved: No
Date TMDL Approved: Not Applicable
6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

<div style="margin-bottom: 5px;"><input checked="" type="checkbox"/> State Water Control Law</div> <div style="margin-bottom: 5px;"><input checked="" type="checkbox"/> Clean Water Act</div> <div style="margin-bottom: 5px;"><input checked="" type="checkbox"/> VPDES Permit Regulation</div> <div style="margin-bottom: 5px;"><input checked="" type="checkbox"/> EPA NPDES Regulation</div>	<div style="margin-bottom: 5px;"><input type="checkbox"/> EPA Guidelines</div> <div style="margin-bottom: 5px;"><input checked="" type="checkbox"/> Water Quality Standards</div> <div style="margin-bottom: 5px;"><input checked="" type="checkbox"/> Other: 9 VAC 25-120</div>
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7. Licensed Operator Requirements: Not Applicable
8. Reliability Class: Not Applicable

9. Permit Characterization:

<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Effluent Limited	<input type="checkbox"/> Possible Interstate Effect
<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Water Quality Limited	<input type="checkbox"/> Compliance Schedule Required
<input type="checkbox"/> State	<input checked="" type="checkbox"/> Toxics Monitoring Program Required	<input type="checkbox"/> Interim Limits in Permit
<input type="checkbox"/> POTW	<input type="checkbox"/> Pretreatment Program Required	<input type="checkbox"/> Interim Limits in Other Document
<input type="checkbox"/> TMDL		

10. Waste water Sources and Treatment Description:

Motiva operates a petroleum product distribution terminal at 8206 Terminal Road bordered to the west by Interstate 95 and south by Terminal Road in Lorton, Virginia. The facility receives petroleum products from the Plantation Pipeline and stores them in nine (9) above ground storage tanks (ASTs) that are located within the dike area of the property. Petroleum products currently stored on site includes gasoline, ethanol/gasoline blend and distillate fuel. Denatured ethanol is delivered by truck and stored in one (1) AST. Total volumes are provided in **Attachment 5**.

AST Dike Area

The ASTs are located within a dike area. Above ground piping transports the fuels into the tanks and to the loading rack. The dike walls are coated with asphalt sealer and the floor of the area is graveled and kept clear of weeds. The drain from this area is kept in the closed position and manually opened to release the stormwater to the oil/water separator.

Loading Rack

The rack is covered and has four bottom-loading racks. The area has a low berm around it and the asphalt slopes to central drains. The drains are connected to the rack sump pit from which the wastewater is pumped to either a 19,000 gallon holding tank (S1) or to a water tank (W1) to be held until it can be hauled off site for disposal. Additives are added at the loading racks. The loading rack is equipped with a fire suppression system that is tested annually.

Truck Washing & Repairs

Motiva does not do any internal truck washing nor any truck repairs or maintenance at this site. A contractor does external truck washing. The storm drains are blocked and the wash water is collected for disposal.

Paved Areas Runoff

Parking lots and vehicle traffic areas are all paved. Stormwater runoff is piped to the o/w separator. During large storm events, sheet flow from the parking area can bypass the separator and flow directly to the pond.

Hydrostatic Test Waters (Internal Outfall 101)

This discharge is generated as needed to test the integrity of the ASTs and the transport trucks. No hydrostatic testing was done during the current permit cycle.

Oil/Water Separator & Pond

Potentially contaminated stormwater and any process wastewater flows into the o/w separator. This o/w separator has a design flow rate of 0.056 MGD and a capacity of 299,970 gallons. The pump is manually operated to remove any oil. All petroleum products removed from the separator are stored in an adjacent UST.

The discharge from the o/w separator and the stormwater bypass flows enter the pond on the eastern side. The pond has a design storage capacity of 0.6 MG. The banks of the pond are covered with rip rap. The pond is approximately 5 feet deep. The effluent discharge elevation is from the middle of the pond.

Outfall 001

The pond effluent discharges into a concrete stormwater culvert that flows into Accotink Creek. The discharge valve is kept in the closed position. Facility personnel check the pH and visually inspect for sheen prior to opening the valve.

See **Attachment 2** for the NPDES Permit Rating Worksheet.

See **Attachment 3** for a facility schematic/diagram.

TABLE 1 OUTFALL DESCRIPTION				
Outfall Number	Discharge Sources	Treatment	Average 30-day Flow	Outfall Latitude and Longitude
001	Industrial Stormwater	See Item 10 above.	0.056 MGD	38° 44' 5" N / 77° 11' 36" W
101	Hydrostatic Test Water	See Item 10 above.	Dependent on tank	38° 44' 5" N / 77° 11' 36" W
See Attachment 4 for the Fort Belvoir topographic map.				

11. Sludge Treatment and Disposal Methods:

There is no municipal sludge generated at this facility.

12. Discharges and Intakes located within Waterbody VAN-A15R:

TABLE 2 LOCATIONS OF DISCHARGES & INTAKES			
Permit Number	Facility Name	Type	Receiving Stream
VA0057380	Quarles Petroleum – Newington	Industrial	Accotink Creek, UT
VA0001872	Fairfax Terminal Complex		Daniels Run, UT
VA0002283	Motiva Enterprises LLC – Fairfax		Crook Branch
VA0001945	Kinder Morgan Southeast Terminals		Accotink Creek, UT
VAR050988	Canada Dry – Springfield	Stormwater Industrial	Flag Run
VAR051047	Fairfax County – Connector Bus Yard		Long Branch
VAR051042	SICPA Securink Corporation		Accotink Creek
VAR051053	United Parcel Service – Springfield		Flag Run
VAR051719	National Asphalt Paving Corporation – Fairfax		Accotink Creek
VAR051770	Fairfax County – Jermantown Maintenance Facility		Accotink Creek, UT
VAR051565	Rolling Frito Lay Sales LP – South Potomac DC		Accotink Creek
VAR051863	United Parcel Service – Newington		Accotink Creek
VAR051134	G and L Metals		Long Branch, UT
VAR051772	Fairfax County – DVS – Alban Maintenance Facility		Field Lark Branch
VAR051066	US Postal Service – Merrifield Vehicle Maintenance		Long Branch, UT

13. Material Storage: See **Attachment 5** for the list of chemicals stored on site.**14. Site Inspection:** Performed by DEQ-NRO Compliance Staff on 25 September 2007 (see **Attachment 6**).**15. Receiving Stream Water Quality and Water Quality Standards:**a. Ambient Water Quality Data

There is no DEQ monitoring data for the receiving stream. The nearest DEQ water quality monitoring station is located on Accotink Creek at the Route 790 bridge crossing; 1AACO006.10, approximately 1.11 rivermiles downstream of the facility.

Downstream impairments for fish consumption, aquatic life and recreational use have been noted. The Environmental Protection Agency (EPA) approved the TMDLs for the PCB impairment on 31 October 2007 and the recreational impairment due to bacteria on 18 December 2008.

All relevant upstream point source discharges were considered under the aforementioned TMDLs; however, this facility did not receive a Wasteload Allocation (WLA) for either PCBs or *E. coli* since the pollutants of concern are not believed to be present in the discharge.

A TMDL addressing the aquatic life use impairment is due by 2010.

b. Receiving Stream Water Quality Criteria

Part IX of 9 VAC 25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream Accotink Creek, UT is located within Section 7 of the Potomac River Basin and classified as Class III water.

At all times, Class III waters must achieve Dissolved Oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32° C and maintain a pH of 6.0– 9.0 standard units (S.U.).

Attachment 7 details other water quality criteria applicable to the receiving stream.

Ammonia:

The 7Q10 and 1Q10 of the receiving stream are 0.0 MGD; therefore, a default temperature value of 25° C and a pH value of 8.0 S.U. were used to calculate the ammonia water quality standards. The ammonia water quality criteria calculations are shown in **Attachment 7**.

Metals Criteria:

The Water Quality Criteria for some metals are dependent on the receiving stream's hardness (mg/L CaCO₃). However, the 7Q10 of the receiving stream is zero and no ambient data is available. Staff used a default hardness value of 50 mg/L to determine the metals criteria. The hardness-dependent metals criteria shown in **Attachment 7** are based on this value.

Bacteria Criteria:

The Virginia Water Quality Standards (9 VAC 25-260-170 A.) establishes the following criteria to protect primacy contact recreation:

E. coli bacteria per 100 mL of water shall not exceed the following:

	Geometric Mean ¹
Freshwater <i>E. coli</i> (N/100 mL)	126

¹For four or more samples taken during any calendar month

This is an industrial stormwater discharge. It is staff's best professional judgement that this pollutant is not present.

c. Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9 VAC 25-260-360, 370 and 380) designates the river basins, sections, classes and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, Accotink Creek, UT, is located within Section 7 of the Potomac River Basin. This section has been designated with a special standard of 'b'.

Special Standard 'b' (Potomac Embayment Standards) established effluent standards for all sewage plants discharging into Potomac River embayments and for expansions of existing plants discharging into non-tidal tributaries of these embayments. 9 VAC 25-415, Policy for the Potomac Embayments, controls point source discharges of conventional pollutants into the Virginia embayment waters of the Potomac River and their tributaries, from the fall line at Chain Bridge in Arlington County to the Route 301 bridge in King George County. The regulation sets effluent limits for BOD₅, Total Suspended Solids, Phosphorus and Ammonia to protect the water quality of these high profile waterbodies.

The Potomac Embayment Standards are not applicable to this facility since the discharge does not contain the pollutants of concern in appreciable amounts.

d. Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched for records on 21 January 2010 to determine if there are threatened or endangered species in the vicinity of the discharge. Threatened or endangered species were identified within a 2 mile radius of the discharge. The limits proposed in this draft permit are protective of the Virginia Water Quality Standards and therefore protect the threatened and endangered species found near the discharge.

16. Antidegradation (9 VAC 25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 1 based on the fact that the critical flows 7Q10 and 1Q10 for Accotink Creek, UT have been determined to be 0.0 MGD. Permit limits proposed have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development:

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points are equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA s) are calculated. In this case, since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLAs are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency and statistical characteristics of the effluent data.

a. Effluent Screening

Effluent data obtained from Discharge Monitoring Reports (DMRs) and the permit application has been reviewed and determined to be suitable for evaluation.

The following pollutants require a wasteload allocation analysis: Chlorine, Lead and Zinc.

b. Mixing Zones and Wasteload Allocations (WLAs)

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f) (Q_s)] - [(C_s) (f) (Q_s)]}{Q_e}$$

Where:	WLA	=	Wasteload allocation
	C _o	=	In-stream water quality criteria
	Q _e	=	Design flow
	Q _s	=	Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; harmonic mean for carcinogen-human health criteria; 30Q10 for ammonia criteria; and 30Q5 for non-carcinogen human health criteria)
	f	=	Decimal fraction of critical flow
	C _s	=	Mean background concentration of parameter in the receiving stream

The water segment receiving the discharge via Outfall 001 has been determined to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there is no mixing zone and the WLA is equal to the C_o.

c. Effluent Limitations, Outfall 001 and Outfall 101 – Toxic Pollutants

9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9 VAC 25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) Ammonia as N:

This is an industrial, stormwater discharge and ammonia based products are not utilized or stored at this facility. It is staff's best professional judgement that ammonia is not present; thus, not a pollutant of concern at this facility.

2) Total Residual Chlorine:

Potable water may be utilized during any hydrostatic testing. Potable water contains measurable amounts of chlorine residual between 1.0 mg/L to 3.0 mg/L; therefore, TRC limitations were established and are only applicable if the water used to conduct the test has been chlorinated. Staff calculated WLAs for TRC using current critical flows. In accordance with current DEQ guidance, staff used a default data point of 0.2 mg/L and the calculated WLAs to derive limits.

An instantaneous maximum limitation of 0.016 mg/L is proposed for Outfall 101 (see **Attachment 8**).

3) Metals:

During the last permit term, the permittee was required to monitor for Lead and Zinc. These data were used to determine if a limit is needed for these metals.

All reported data for Lead was found below the quantification level; therefore, it is staff's best professional judgement that no limit is warranted.

Attachment 9 is a limit determination for Zinc utilizing the data submitted on Discharge Monitoring Reports (DMRs). It indicates that no limit is warranted.

4) BTEX, petroleum products and hydrostatic testing water parameters:

The following discussion, relative to this facility, can be found in the Fact Sheet for the General VPDES Permit Regulation for Discharges from Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests (9 VAC 25-120 et al.); which was reissued on 26 February 2008:

Benzene

The EPA criteria document for benzene (EPA 440/5-80-018, EPA 1980a) states that benzene may be acutely toxic to freshwater organisms at concentrations as low as 5,300 µg/L. This is an LC50 value for rainbow trout. The document also states that acute toxicity would occur at lower concentrations among more sensitive species. No data were available concerning the chronic toxicity of benzene to sensitive freshwater organisms. The derivation of a "safe level" for benzene was based on the 5,300 µg/L LC50. This value was divided by 10 in order to approximate a level which would not be expected to cause acute toxicity. The use of an application factor of 10 was recommended by the National Academy of Sciences in the EPA's publication "Water Quality Criteria, 1972" (EPA/R3/73-033). This use of application factors when setting water quality criteria is still considered valid in situations where data are not sufficient to develop criteria according to more recent guidance. The resulting "non-lethal" concentration of 530 µg/L was divided by an assumed acute to chronic ratio of 10 to arrive at the water quality-based permit limitation of 53 µg/L. When actual data are not available, EPA, in the Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) recommends using an acute to chronic ratio of 10. The EPA model permit's technology-based 50 µg/L value is more protective, therefore, it was chosen over the 53 µg/L water quality-based concentration.

Ethylbenzene

The EPA criteria document for ethylbenzene (EPA 440/5-80-048, EPA 1980b) gives an acute effects concentration of 32,000 µg/L. This is an LC50 for bluegill sunfish. Acute toxicity may occur at lower concentrations if more sensitive species were tested. No definitive data are available on the chronic toxicity of ethylbenzene to freshwater organisms. In order to derive an acceptable level of ethylbenzene for the protection of freshwater organisms the acute value of 32,000 µg/L was divided by 100, using the same assumptions employed above for benzene. The resulting value of 320 µg/L is a calculated chronic toxicity concentration for ethylbenzene.

Toluene

The EPA criteria document for toluene (EPA 440/5-80-075, EPA 1980c) states that acute toxicity to freshwater organisms occurs at 17,500 µg/L and would occur at lower concentrations if more sensitive organisms were tested. No data are available on the chronic toxicity of toluene to freshwater species. Based on the available data for acute toxicity and dividing by the application factor of 100, the proposed effluent limit for toluene discharged to freshwater is 175 µg/L.

Xylenes

Xylene is not a 307(a) priority pollutant; therefore, no criteria document exists for this compound. There are three isomers of xylene (ortho, meta and para) and the general permit limits are established so that the sum of all xylenes is considered in evaluating compliance. The proposed effluent limits are based on a search of the EPA's ECOTOX data base. According to ECOTOX, the lowest freshwater LC50 for xylenes is 3,300 µg/L reported for rainbow trout (Mayer and Ellersieck 1986). Based on the rationale presented earlier for other compounds, this acutely toxic concentration was divided by 10 to account for species that were not tested but which may be more sensitive than rainbow trout. Then, in order to find a concentration that is expected to be safe over chronic exposures, an additional safety factor of 10 was applied to arrive at the proposed effluent limitation of 33 µg/L total xylenes.

Methyl Tertiary Butyl Ether

Methyl Tertiary Butyl Ether (MTBE) is a common additive in "reformulated" automotive gasoline. This oxygenate is supposed to reduce winter-time carbon monoxide levels in U.S. cities. It also is believed to be effective in reducing ozone and other toxics in the air year-round. If MTBE is used, it can be present in gasoline at up to 15% of the volume of the fuel. MTBE is an extremely hydrophilic compound.

Neither EPA nor the DEQ has established water quality criteria for MTBE for protection of aquatic life or human health. Literature searches indicated several studies that evaluated the effects of MTBE on aquatic organisms. According to BenKinney et al. (1994), MTBE was acutely toxic (LC50) to green algae (*Selenastrum capricornutum*) at a concentration of 184,000 µg/L. Geiger and associates (1988) found that MTBE was acutely toxic to the fathead minnow (*Pimephales promelas*) at a concentration of 672 mg/L (672,000 µg/L). Application of the customary safety factor of 100 to the LC50 concentration for green algae results in a concentration of 1,840 µg/L. This concentration is recommended as the discharge limit for MTBE into freshwater.

Ethanol

Neither the DEQ nor EPA has promulgated acute and chronic water quality criteria for ethanol in surface waters. Acute and chronic water quality benchmarks for ethanol were developed using toxicity information available for aquatic invertebrates (Daphnia species), rainbow trout, and the fathead minnow from EPA's ECOTOX database (Iott 2001). Based on the available data and using Tier II procedures outlined in the for EPA's Final Water Quality Guidance for the Great Lakes System, an acute water quality benchmark for ethanol in surface water is 564 mg/L, and a chronic water quality benchmark for ethanol is 63 mg/L. The values indicate that an ethanol concentration of 564 mg/L in the water column is likely to cause acute toxicity to freshwater aquatic life and that an ethanol concentration of 64 mg/L in the water column is likely to cause chronic toxicity to freshwater life. The chronic and acute water quality benchmarks developed for ethanol (EPA 2006) are lower than draft water quality criteria developed by the EPA.

Ethanol does not bioaccumulate or bioconcentrate in the tissue of living organisms due to ethanol's chemical properties and to the ability of most organisms to metabolize ethanol (Iott 2001). Human health risks from exposure to ethanol appear to be minimal, especially when compared with the risks posed by other gasoline constituents. Likewise, aquatic toxicity levels for ethanol are quite high. Ethanol also appears to degrade rapidly in both surface and subsurface environments. Based upon these factors, the DEQ does not believe that effluent limits for ethanol are needed for discharge of waters associated with petroleum products containing up to 10% ethanol.

Ethanol concentrations in discharges of petroleum products containing greater than 10% ethanol may pose risks to aquatic organisms. For discharge of petroleum products containing greater than 10% ethanol into surface water bodies not designated as a PWS, a maximum discharge limit of 4.1 mg/L is proposed.

pH

The pH limits in this general permit are based on the Virginia Water Quality Standards and range from a low of six (6.0) standard units to nine (9.0) standard units.

Naphthalene

The EPA criteria document for naphthalene (EPA 440/5-80-059) gives a chronic effect concentration of 620 µg/L with fathead minnows, but it states that effects would occur at lower concentrations if more sensitive freshwater organisms were tested. According to the ECOTOX DATABASE, naphthalene at a concentration of 1,000 µg/L was lethal to 50% of the water fleas (*Daphnia pulex*) tested (Truco et al. 1983). DeGaere and associates (1982) tested the effects of naphthalene on Rainbow Trout and reported an LC50 concentration of 1600 µg/L. Based upon these more recent studies, it is recommended that the effluent limit for naphthalene in freshwater be set at 10 µg/L.

Total Petroleum Hydrocarbons (TPH)

The general permit proposes a technology-based limit of 15 mg/L for TPH. This limit is applicable for discharges where the contamination is from petroleum products other than gasoline. It is based on the ability of simple oil-water separator technology to recover free product from water. Wastewater that is discharged without a visible sheen is generally expected to meet this effluent limitation. DEQ has used this limitation for many individual permits for many years and monitoring data has demonstrated that it is readily achievable. Mass limits are not applicable to this type of pollutant and discharge and are not required.

It is staff's best professional judgement that the limitations and monitoring requirements as set forth above are applicable to this discharge and are proposed as such.

It should be noted that the Water Quality Standards triennial review was completed and approved by EPA during the drafting of this permit. The proposed limits are the most stringent for this type of facility. Please refer to the Water Quality Criteria in **Attachment 7** which reflects the approved triennial review.

d. Effluent Limitations and Monitoring, Outfall 001 and Outfall 101 – Conventional and Non-Conventional Pollutants

No changes to Total Suspended Solids (TSS) and pH limitations are proposed.

pH limitations are set at the water quality criteria.

e. Effluent Limitations and Monitoring Summary

The effluent limitations are presented in the following tables. Limitations and monitoring requirements were established for Total Suspended Solids, Total Petroleum Hydrocarbons (TPH), BTEX, pH, Naphthalene, Ethanol, MTBE and Total Residual Chlorine.

The limit for Total Suspended Solids is based on Best Professional Judgement.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual.

18. Antibalancing:

9 VAC 25-31-220.L. allows exceptions in which a reissued permit may contain less stringent effluent limitations upon determination that technical mistakes were previously applied to ascertain effluent limitations. In addition, the proposed limitations should not result in a violation of Water Quality Standards applicable to the receiving waters.

During the previous reissuance, it was staff's best professional judgement that a limitation for MTBE be placed on Outfall 001. DMR data indicates that this pollutant is not of concern for this Outfall. Presence of MTBE would be indicative of a spill occurring within the dike area and the facility has a SPCCC in place for such occurrences. Therefore, it is staff's best professional judgement that this parameter be removed at Outfall 001 but shall remain for hydrostatic tests since the presence of MTBE would be more likely.

19a. Effluent Limitations/Monitoring Requirements: Outfall 001

Maximum Flow from the pond is rated at 0.016 MGD.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Frequency</u>	<u>Sample Type</u>
Flow (MGD)	NA	NL	N/A	N/A	NL	1/Q	Estimate
pH	3	N/A	N/A	6.0 S.U.	9.0 S.U.	1/Q	Grab
Total Suspended Solids (TSS)	2	N/A	N/A	N/A	60 mg/L	1/Q	Grab
Total Petroleum Hydrocarbons*	4	N/A	N/A	N/A	15 mg/L	1/Q	Grab
Acute Toxicity (TU _a)		N/A	N/A	N/A	NL	1/Y	Grab

The basis for the limitations codes are:

- | | | |
|----------------------------------|---|---|
| 1. Federal Effluent Requirements | <i>MGD</i> = Million gallons per day. | <i>1/Q</i> = Once every calendar quarter. |
| 2. Best Professional Judgement | <i>N/A</i> = Not applicable. | <i>1/Y</i> = Once every calendar year. |
| 3. Water Quality Standards | <i>NL</i> = No limit; monitor and report. | |
| 4. 9 VAC 25-120 | <i>S.U.</i> = Standard units. | |

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

*Total Petroleum Hydrocarbons (TPH) shall be analyzed using the Wisconsin Department of Natural Resources Modified Diesel Range Organics Method as specified in Wisconsin publication SW-141 (1995) or by EPA SW-846 Method 8015C for diesel range organics or by EPA SW-846 Method 8270D. If Method 8270D is used, the lab must report the combination of diesel range organics and polynuclear aromatic hydrocarbons.

The quarterly monitoring periods shall be January through March, April through June, July through September and October through December.
The DMR shall be submitted no later than the 10th day of the month following the monitoring period.

19b. Effluent Limitations/Monitoring Requirements: Internal Outfall 101 (Hydrostatic Test Waters)

Maximum Flow is dependent of tank volume.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Daily Maximum	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	N/A	N/A	NL	2/Discharge	Estimate
pH	3	N/A	N/A	6.0 S.U.	9.0 S.U.	2/Discharge	Grab
Total Suspended Solids (TSS)	2	N/A	N/A	N/A	60 mg/L	2/Discharge	Grab
Total Petroleum Hydrocarbons*	2,4	N/A	N/A	N/A	15 mg/L	2/Discharge	Grab
Total Residual Chlorine (TRC)	3	N/A	N/A	N/A	0.016 mg/L	2/Discharge	Grab
Benzene	2,4	N/A	N/A	N/A	50 µg/L	2/Discharge	Grab
Toluene	2,4	N/A	N/A	N/A	175 µg/L	2/Discharge	Grab
Ethylbenzene	2,4	N/A	N/A	N/A	320 µg/L	2/Discharge	Grab
Total Xylene	2,4	N/A	N/A	N/A	33 µg/L	2/Discharge	Grab
Methyl Tertiary Butyl Ether (MTBE)	2,4	N/A	N/A	N/A	1,840 µg/L	2/Discharge	Grab
Ethanol**	2,4	N/A	N/A	N/A	4100 µg/L	2/Discharge	Grab
Naphthalene***	2,4	N/A	N/A	N/A	10 µg/L	2/Discharge	Grab

The basis for the limitations codes are:

- | | |
|----------------------------------|---|
| 1. Federal Effluent Requirements | <i>MGD</i> = Million gallons per day. |
| 2. Best Professional Judgement | <i>N/A</i> = Not applicable. |
| 3. Water Quality Standards | <i>NL</i> = No limit; monitor and report. |
| 4. 9 VAC 25-120 | <i>S.U.</i> = Standard units. |

2/Discharge = Two (2) samples per hydrostatic tank test. The first sample shall be collected during the initial discharge or be a representative sample collected and analyzed prior to the discharge. The second sample shall be collected during the discharge of the final 20% by volume or the last two (2) feet of hydrostatic tank test water. Samples shall be collected from the discharge point of the aboveground storage tank.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

*Total Petroleum Hydrocarbons (TPH) shall be analyzed using the Wisconsin Department of Natural Resources Modified Diesel Range Organics Method as specified in Wisconsin publication SW -141 (1995) or by EPA SW -846 Method 8015C for diesel range organics or by EPA SW -846 Method 8270D. If Method 8270D is used, the lab must report the combination of diesel range organics and polynuclear aromatic hydrocarbons.

** Monitoring is only required for tanks containing petroleum products consisting of Ethanol greater than 10%.

*** Naphthalene monitoring is only required when testing occurs on tanks containing aviation gasoline, jet fuel or diesel.

Naphthalene shall be analyzed by a current and appropriate EPA Wastewater Method from 40 CFR Part 136 (2007) or a current and appropriate EPA SW 846 Method.

20. Other Permit Requirements:

- a. Part I.B. of the permit contains quantification levels and compliance reporting instructions.

9 VAC 25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

- b. Permit Section Part I.C. details the requirements for Toxics Management Program.

The VPDES Permit Regulation at 9 VAC 25-31-210 requires monitoring and 9 VAC 25-31-220.I. requires limitations in the permit to provide for and assure compliance with all applicable requirements of the State Water Control Law and the Clean Water Act. A TMP is imposed for municipal facilities with a design rate > 1.0 MGD, with an approved pretreatment program or required to develop a pretreatment program or those determined by the Board based on effluent variability, compliance history, IWC and receiving stream characteristics.

The Motiva Enterprises – Springfield facility is an industrial discharger with an effluent that may be potentially toxic. It is staff's best professional judgement that the permittee continue to conduct acute testing during this permit term using *C. dubia* and *P. promelas* on an alternating basis as the test species for Outfall 001. See **Attachment 10** for a summary of previous test results.

- c. Permit Section Part I.D. details the requirements of a Storm Water Management Plan.

9 VAC 25-31-10 defines discharges of storm water associated with industrial activity. 9 VAC 25-31-120 requires a permit for these discharges. The pollution Prevention Plan requirements are derived from the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

21. Other Special Conditions:

- a. O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9 VAC 25-31-190.E. On or before 19 July 2010, the permittee shall submit for approval an Operations and Maintenance (O&M) Manual or a statement confirming the accuracy and completeness of the current O&M Manual to the Department of Environmental Quality, Northern Regional Office (DEQ-NRO). Future changes to the facility must be addressed by the submittal of a revised O&M Manual within 90 days of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.
- b. Water Quality Criteria Reopener. The VPDES Permit Regulation at 9 VAC 25-31-220 D. requires establishment of effluent limitations to ensure attainment/maintenance of receiving stream water quality criteria. Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.
- c. Notification Levels. The permittee shall notify the Department as soon as they know or have reason to believe:
- (1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
 - (a) One hundred micrograms per liter;
 - (b) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;
 - (c) Five times the maximum concentration value reported for that pollutant in the permit application; or
 - (d) The level established by the Board.
 - (2) That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
 - (a) Five hundred micrograms per liter;
 - (b) One milligram per liter for antimony;
 - (c) Ten times the maximum concentration value reported for that pollutant in the permit application; or
 - (d) The level established by the Board.

- d. Oil Storage Ground Water Monitoring Reopener. As this facility currently manages ground water in accordance with 9 VAC 25-90-10 et seq., Oil Discharge Contingency Plans and Administration Fees for Approval, this permit does not presently impose ground water monitoring requirements. However, this permit may be modified or alternately revoked and reissued to include ground water monitoring not required by the ODCP regulation.
- e. Materials Handling/Storage. 9 VAC 25-31-50.A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorize the Board to regulate the discharge of industrial waste or other waste.
- f. Hydrostatic Testing. The permittee shall obtain approval from the DEQ Northern Regional Office forty-eight (48) hours in advance of any discharge resulting from hydrostatic testing. The conditions of approval will be contingent on the volume and duration of the proposed discharge, and the nature of the residual product.
- g. TMDL Reopener. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL that may be developed and approved for the receiving stream.
- 22. Permit Section Part II**. Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.
- 23. Changes to the Permit from the Previously Issued Permit:**
- a. Special Conditions: Not Applicable.
- b. Monitoring and Effluent Limitations:
- The following parameters were added or limitations were adjusted to reflect those set forth in 9 VAC 25-120:
 - Benzene limitations were changed from 53 µg/L to 50 µg/L.
 - Total Xylene limitations were changed from 82 µg/L to 33 µg/L.
 - The Naphthalene limit was changed from 62 µg/L to 10 µg/L.
 - The parameter Ethanol was included with this reissuance.
 - TOC monitoring for Hydrostatic Tests was removed per current agency guidance.
 - Monitoring for Dissolved Lead and Dissolved Zinc at Outfall 001 were removed.
 - Methyl Tertiary Butyl Ether limit was removed at Outfall 001 per current guidance and best professional judgement.

24. Variances/Alternate Limits or Conditions: Not Applicable

25. Public Notice Information:

First Public Notice Date: 17 March 2010 Second Public Notice Date: 24 March 2010

Public Notice Information is required by 9 VAC 25-31-280 B. All pertinent information is on file and may be inspected and copied by contacting the: DEQ Northern Regional Office; 13901 Crown Court, Woodbridge, VA 22193; Telephone No. (703) 583-3873; Douglas.Frasier@deq.virginia.gov. See **Attachment 11** for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may request an electronic copy of the draft permit and fact sheet or review the draft permit and application at the DEQ Northern Regional Office by appointment.

26. 303 (d) Listed Stream Segments and Total Max. Daily Loads (TMDL):

Downstream impairments for fish consumption, aquatic life and recreational use have been noted. The Environmental Protection Agency (EPA) approved downstream TMDLs for the PCB impairment and the recreational impairment. All relevant upstream point source discharges were considered under these TMDLs; however, this facility did not receive a Wasteload Allocation (WLA) for either pollutant since it is not believed present in the discharge.

A TMDL addressing the aquatic life use impairment is due by 2010.

27. Additional Comments:

Previous Board Action(s):	Not Applicable.
Staff Comments:	None.
Public Comment:	No comments were received during the public notice.
EPA Checklist:	The checklist can be found in Attachment 12 .

Fact Sheet Attachments

Table of Contents

Motiva Enterprises – Springfield Terminal
VA0001988
2010 Reissuance

Attachment 1	Flow Frequency Determination
Attachment 2	NPDES Permit Rating Worksheet
Attachment 3	Facility Schematic/Diagram
Attachment 4	Topographic Map
Attachment 5	Material Storage
Attachment 6	Inspection Report
Attachment 7	Water Quality Criteria
Attachment 8	TRC Limitation Determination
Attachment 9	Zinc Limitation Determination
Attachment 10	Toxicity Test Results Summary
Attachment 11	Public Notice
Attachment 12	EPA Checklist

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Office of Water Quality Assessments
629 East Main Street P.O. Box 10009 Richmond, Virginia 23219

SUBJECT: Flow Frequency Determination
Motiva Springfield Terminal - #VA0001988

TO: April Young, NRO

FROM: Paul E. Herman, P.E., WQAP *PEH*

DATE: July 13, 1999

COPIES: Ron Gregory, Charles Martin, File

RECEIVED

JUL 14 1999

Northern VA. Region
Dept. of Env. Quality

The Motiva Springfield Terminal (formerly Shell Oil) discharges to an unnamed tributary of the Accotink Creek near Newington, Virginia. Flow frequencies are required at this site for use by the permit writer in developing the VPDES permit.

The flow frequencies for the discharge receiving stream were determined by inspection of the USGS Fort Belvoir Quadrangle topographic map and on site visits by DEQ staff. The map depicts the stream as intermittent and the DEQ site visit confirmed the intermittent characteristic of the stream. The flow frequencies for intermittent streams are 0.0 cfs for the 1Q10, 7Q10, 30Q5, high flow 1Q10, high flow 7Q10, and harmonic mean. In the future, flow frequency request forms are not required for this facility **unless** the outfall is relocated or the characteristics of their effluent change such that they become a municipal discharge that must be modeled.

If you have any questions concerning this analysis, please let me know.

NPDES PERMIT RATING WORK SHEETVPDES NO. : VA0001988

- ☐ Regular Addition
☐ Discretionary Addition
☒ Score change, but no status Change
☐ Deletion

Facility Name: Motiva Enterprises LLC – Springfield TerminalCity / County: Lorton / Fairfax CountyReceiving Water: Accotink Creek, UT

Waterbody ID: _____

Is this facility a steam electric power plant (sic =4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power Plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

- ☐ YES; score is 700 (stop here)
☒ NO; (continue)

☐ Yes; score is 600 (stop here) ☒ NO; (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: _____ Primary Sic Code: 5171 Other Sic Codes: _____

Industrial Subcategory Code: 000 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	15	<input type="checkbox"/> 7.	7	35
<input type="checkbox"/> 1.	1	5	<input type="checkbox"/> 4.	4	20	<input checked="" type="checkbox"/> 8.	8	40
<input type="checkbox"/> 2.	2	10	<input type="checkbox"/> 5.	5	25	<input type="checkbox"/> 9.	9	45
			<input type="checkbox"/> 6.	6	30	<input type="checkbox"/> 10.	10	50

Code Number Checked: 8**Total Points Factor 1:** 40**FACTOR 2: Flow/Stream Flow Volume** (Complete either Section A or Section B; check only one)

Section A – Wastewater Flow Only considered

Wastewater Type (see Instructions)	Code	Points
Type I: Flow < 5 MGD	<input type="checkbox"/> 11	0
Flow 5 to 10 MGD	<input type="checkbox"/> 12	10
Flow > 10 to 50 MGD	<input type="checkbox"/> 13	20
Flow > 50 MGD	<input type="checkbox"/> 14	30
Type II: Flow < 1 MGD	<input checked="" type="checkbox"/> 21	10
Flow 1 to 5 MGD	<input type="checkbox"/> 22	20
Flow > 5 to 10 MGD	<input type="checkbox"/> 23	30
Flow > 10 MGD	<input type="checkbox"/> 24	50
Type III: Flow < 1 MGD	<input type="checkbox"/> 31	0
Flow 1 to 5 MGD	<input type="checkbox"/> 32	10
Flow > 5 to 10 MGD	<input type="checkbox"/> 33	20
Flow > 10 MGD	<input type="checkbox"/> 34	30

Section B – Wastewater and Stream Flow Considered

Wastewater Type (see Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow	Code	Points
Type I/II:	< 10 %	<input type="checkbox"/> 41	0
	10 % to < 50 %	<input type="checkbox"/> 42	10
	> 50%	<input type="checkbox"/> 43	20
Type II:	< 10 %	<input type="checkbox"/> 51	0
	10 % to < 50 %	<input type="checkbox"/> 52	20
	> 50 %	<input type="checkbox"/> 53	30

Code Checked from Section A or B: 21**Total Points Factor 2:** 10

NPDES PERMIT RATING WORK SHEET**FACTOR 3: Conventional Pollutants**

(only when limited by the permit)

A. Oxygen Demanding Pollutants: (check one) ☐ BOD ☐ COD ☐ Other: _____

Permit Limits: (check one)

	Code	Points
<input type="checkbox"/> < 100 lbs/day	1	0
<input type="checkbox"/> 100 to 1000 lbs/day	2	5
<input type="checkbox"/> > 1000 to 3000 lbs/day	3	15
<input type="checkbox"/> > 3000 lbs/day	4	20

Code Number Checked: N/A**Points Scored:** 0

B. Total Suspended Solids (TSS)

Permit Limits: (check one)

	Code	Points
<input checked="" type="checkbox"/> < 100 lbs/day	1	0
<input type="checkbox"/> 100 to 1000 lbs/day	2	5
<input type="checkbox"/> > 1000 to 5000 lbs/day	3	15
<input type="checkbox"/> > 5000 lbs/day	4	20

Code Number Checked: 1**Points Scored:** 0C. Nitrogen Pollutants: (check one) ☐ Ammonia ☐ Other: _____

Permit Limits: (check one)

	Code	Points
<input type="checkbox"/> < 300 lbs/day	1	0
<input type="checkbox"/> 300 to 1000 lbs/day	2	5
<input type="checkbox"/> > 1000 to 3000 lbs/day	3	15
<input type="checkbox"/> > 3000 lbs/day	4	20

Code Number Checked: N/A**Points Scored:** 0**Total Points Factor 3:** 0**FACTOR 4: Public Health Impact**

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this include any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above reference supply.

☐ YES; (If yes, check toxicity potential number below)☒ NO; (If no, go to Factor 5)

Determine the *Human Health* potential from Appendix A. Use the same SIC doe and subcategory reference as in Factor 1. (Be sure to use the *Human Health* toxicity group column – check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	0	<input type="checkbox"/> 7.	7	15
<input type="checkbox"/> 1.	1	0	<input type="checkbox"/> 4.	4	0	<input type="checkbox"/> 8.	8	20
<input type="checkbox"/> 2.	2	0	<input type="checkbox"/> 5.	5	5	<input type="checkbox"/> 9.	9	25
			<input type="checkbox"/> 6.	6	10	<input type="checkbox"/> 10.	10	30

Code Number Checked: N/A**Total Points Factor 4:** 0

NPDES PERMIT RATING WORK SHEET**FACTOR 5: Water Quality Factors**

- A. *Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-base federal effluent guidelines, or technology-base state effluent guidelines), or has a wasteload allocation been to the discharge*

	Code	Points
<input type="checkbox"/> YES	1	10
<input checked="" type="checkbox"/> NO	2	0

- B. *Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?*

	Code	Points
<input checked="" type="checkbox"/> YES	1	0
<input type="checkbox"/> NO	2	5

- C. *Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?*

	Code	Points
<input type="checkbox"/> YES	1	10
<input checked="" type="checkbox"/> NO	2	0

Code Number Checked: A 2 B 1 C 2
Points Factor 5: A 0 + B 0 + C 0 = 0

FACTOR 6: Proximity to Near Coastal Waters

- A. Base Score: Enter flow code here (from factor 2) 21

Check appropriate facility HPRI code (from PCS):

HPRI#	Code	HPRI Score
<input type="checkbox"/> 1	1	20
<input type="checkbox"/> 2	2	0
<input type="checkbox"/> 3	3	30
<input checked="" type="checkbox"/> 4	4	0
<input type="checkbox"/> 5	5	20

Enter the multiplication factor that corresponds to the flow code: 0.10

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked : 4

Base Score (HPRI Score): 0 X (Multiplication Factor) 0.1 = 0

- B. Additional Points – NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

Code	Points
<input type="checkbox"/> 1	10
<input type="checkbox"/> 2	0

- C. Additional Points – Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 area's of concern (see instructions)?

Code	Points
<input type="checkbox"/> 1	10
<input type="checkbox"/> 2	0

Code Number Checked: A 4 B N/A C N/A
Points Factor 6: A 0 + B 0 + C 0 = 0

NPDES PERMIT RATING WORK SHEET

SCORE SUMMARY

<u>Factor</u>	<u>Description</u>	<u>Total Points</u>
1	Toxic Pollutant Potential	40
2	Flows / Streamflow Volume	10
3	Conventional Pollutants	0
4	Public Health Impacts	0
5	Water Quality Factors	0
6	Proximity to Near Coastal Waters	0
TOTAL (Factors 1 through 6)		50

S1. Is the total score equal to or greater than 80 ☐ YES; (Facility is a Major) ☒ NO

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

☒ NO

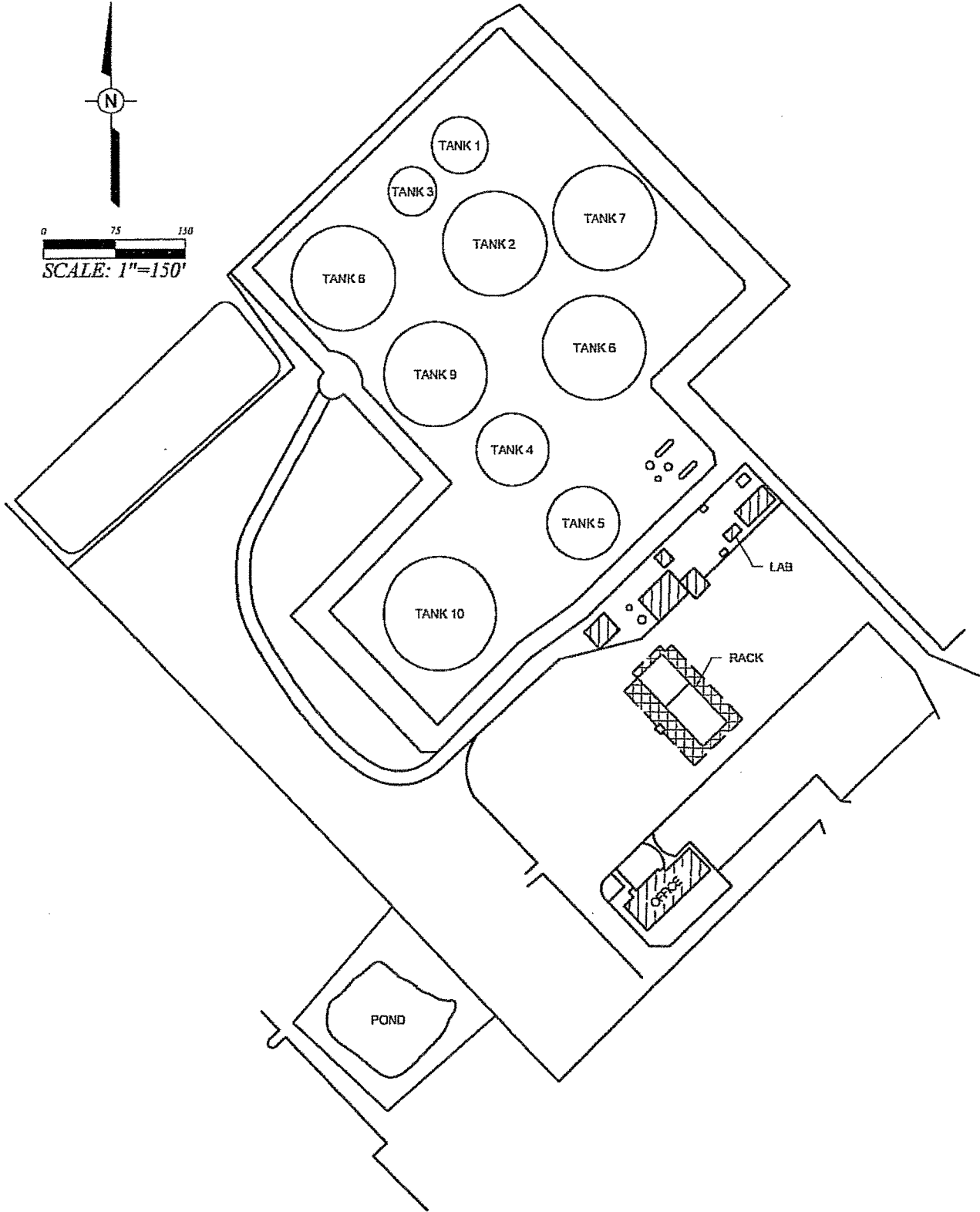
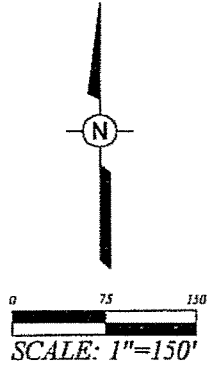
☐ YES; (Add 500 points to the above score and provide reason below:

Reason: _____

NEW SCORE : 50

OLD SCORE : 70

Permit Reviewer's Name : Douglas Frasier
Phone Number: (703) 583-3873
Date: 25 January 2010



BASE MAP PROVIDED BY MACTEC



PPM CONSULTANTS, INC.

DRAWN BY:

BWH

DRAWN DATE:

4/23/09

PROJECT NUMBER:

550409

BILLING GROUP:

09WPEN

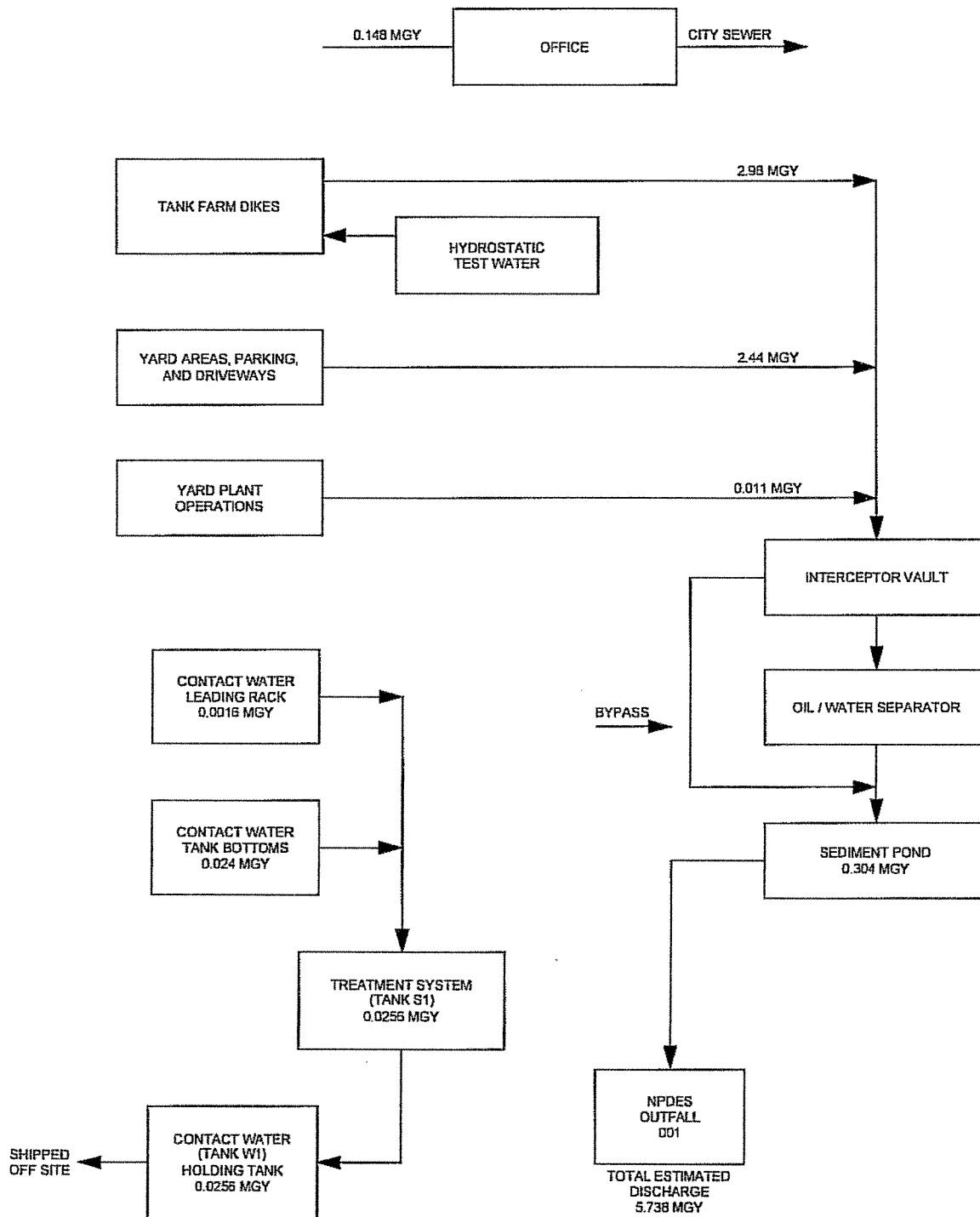
MOTIVA ENTERPRISES LLC
SPRINGFIELD TERMINAL
8206 TERMINAL ROAD
LORTON, VIRGINIA

SITE PLAN

FIGURE
NUMBER

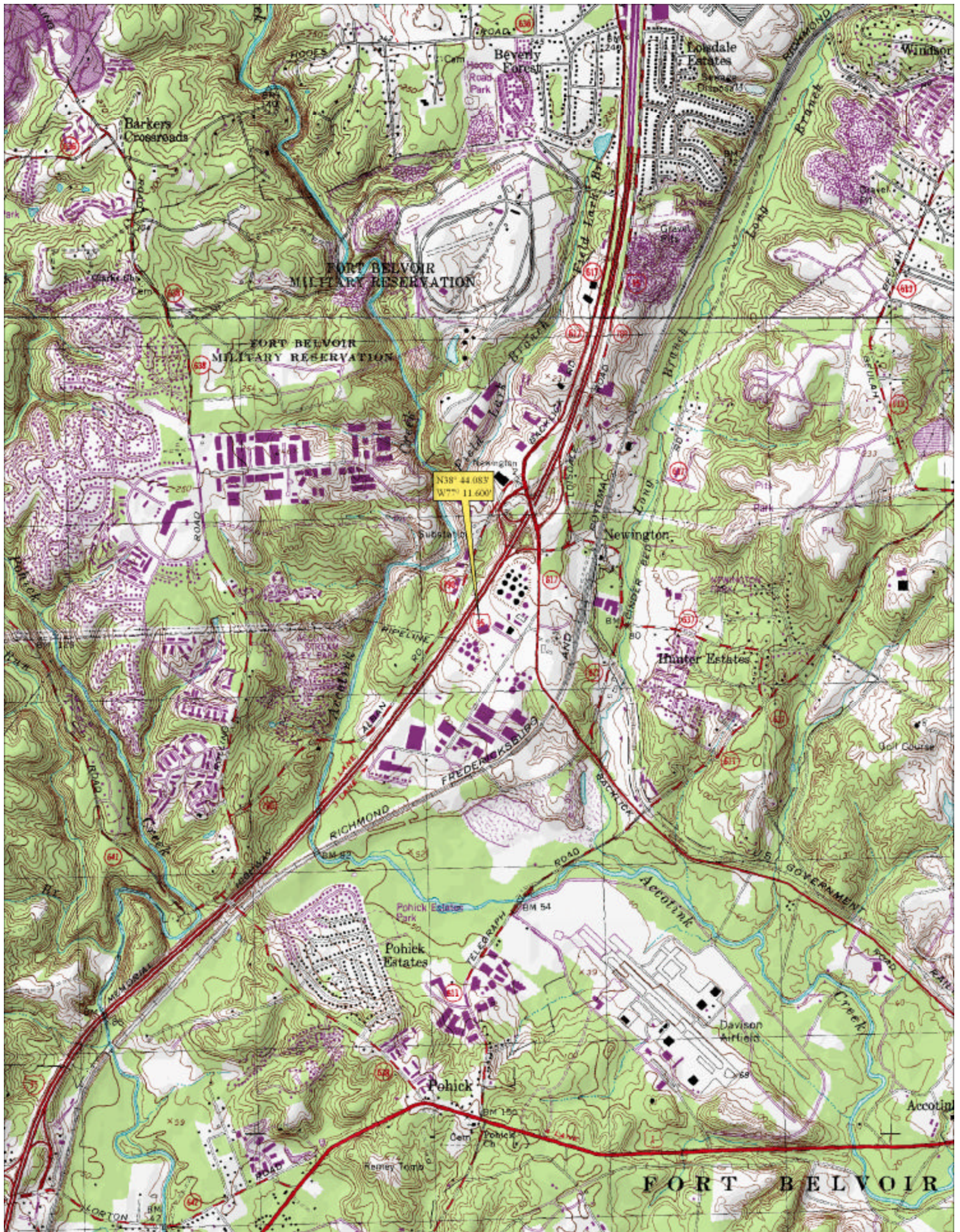
2

Z:\Motiva Enterprises, LLC\550409\WPEN\550409-09WPEN.dwg, 2 sp., 4/23/2009 7:53:20 AM, brian hicks



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PPM PPM CONSULTANTS, INC.		MOTIVA ENTERPRISES LLC SPRINGFIELD TERMINAL 8206 TERMINAL ROAD LORTON, VIRGINIA	FLOW DIAGRAM	FIGURE NUMBER 3
DRAWN BY:	DRAWN DATE:			
BWH	4/23/09			
PROJECT NUMBER:	BILLING GROUP:			
550409	09WPREN			



ATTACHMENT F
FUEL STORAGE FACT SHEET
Petroleum Products, Storage Capacities and Throughput Quantities

Total Storage Capacity for the Facility (all products):

Above Ground: 18,842,300 gallons Underground: 0 gallons

Total Storage Capacity for Individual Products:

<u>Product</u>	<u>Total Storage Capacity</u>
Gasoline	11,882,900 gallons
Jet A	5,781,700 gallons
Diesel	1,101,800 gallons
Additive	46,500 gallons
Contact Water	29,400 gallons

Normal Product Storage Volumes:

<u>Product</u>	<u>Average Volume Stored</u>	<u>Maximum Volume Stored</u>
Gasoline	6,092,017 gallons	10,850,839 gallons
Jet A	2,651,505 gallons	4,362,538 gallons
Diesel	492,500 gallons	989,900 gallons
Additive	30,000 gallons	42,400 gallons

Yearly Product Throughput:

<u>Product</u>	<u>Total Storage Capacity</u>
Gasoline	223,159,000 gallons
Jet A	236,232,000 gallons
Diesel	* gallons
Additive	114,349 gallons
Contact Water	24,000 gallons

* Diesel storage volumes have recently increased; new throughput volumes not available.

The previous inspection on April 13, 1999 noted the sock boom in the siltation pond appeared to be degrading.

Summary of conditions for current inspection

Comments:

No recommendations are included in this report, as the facility is well run and maintained.

LABORATORY INSPECTION REPORT SUMMARY

FACILITY NAME: Motiva Springfield	FACILITY NO: VA0001988	INSPECTION DATE: September 25, 2007
<input type="checkbox"/> Deficiencies	<input checked="" type="checkbox"/> No Deficiencies	
LABORATORY RECORDS		
The Laboratory Records section had No Deficiencies noted during the inspection.		
GENERAL SAMPLING AND ANALYSIS		
The General Sampling and Analysis section had No Deficiencies noted during the inspection.		
LABORATORY EQUIPMENT		
The Laboratory Equipment section had No Deficiencies noted during the inspection.		
INDIVIDUAL PARAMETERS		
pH		
The analysis for the parameter of pH had No Deficiencies noted during the inspection.		
<i>Recommendation:</i> Please remember to record the temperature of the buffers when verifying the calibration curve.		
COMMENTS		
The facility staff should check the DEQ website at http://www.deq.state.va.us/vpdes/checklist.htm and download the most recent inspection check sheets to keep up to date with changes in minimum laboratory requirements.		

DEQ
WATER FACILITY INSPECTION REPORT
PREFACE

VPDES/State Certification No.	(RE) Issuance Date	Amendment Date	Expiration Date
VA0001988	March 28, 2005		March 27, 2010
Facility Name	Address		Telephone Number
Motiva – Springfield Terminal	8206 Terminal Road Lorton, VA		(703) 550-9510
Owner Name	Address		Telephone Number
Motiva Enterprises LLC	8206 Terminal Road Lorton, VA		(703) 550-9510
Responsible Official	Title		Telephone Number
Ms. Susan Horning	Terminal Manager		(703) 550-9510
Responsible Operator	Operator Cert. Class/number		Telephone Number
Mr. Michael Bennet	N/A		(703) 550-9510

TYPE		DOMESTIC		INDUSTRIAL			
Federal		Major		Major		Primary	
Non-federal	X	Minor		Minor	X	Secondary	
INFLUENT CHARACTERISTICS:				DESIGN:			
	Flow		Variable				
	Population Served		N/A				
	Connections Served		One Terminal				
	BOD ₅		N/A				
	TSS		N/A				

Outfall 001 Effluent Limits (Stormwater)							
Parameter	Min.	Avg.	Max.	Parameter	Min.	Avg.	Max.
Flow (MGD)		NL	NL	TPH (mg/L)			15
pH (S.U.)	6		9	Dissolved Lead (µg/L)			NL
TSS (mg/L)			60	Dissolved Zinc (µg/L)			NL
Acute Toxicity (TU-A)			NL	Methly Tert Butyl Ether (µg/L)			1840

Outfall 101 Effluent Limits (Hydrostatic Testing)							
Parameter	Min.	Avg.	Max.	Parameter	Min.	Avg.	Max.
Flow (MGD)		NL	NL	Ethlybenzene (µg/L)			320
pH (S.U.)	6		9	Benzene (µg/L)			53
Total Residual Chlorine (mg/L)			0.016	Toluene (µg/L)			175
TPH (mg/L)			15	Xylene (µg/L)			74
TSS (mg/L)		NL		Napthalene (µg/L)			62
Total Organic Carbon (mg/L)		NL		Methly Tert Butyl Ether (µg/L)			1840
	Receiving Stream			UT to Accotink Creek			
	Basin			Potomac River			
	Discharge Point (LAT)			38° 44' 00" N			
	Discharge Point (LONG)			77° 11' 45" W			

**DEQ
WATER FACILITY
INSPECTION REPORT
PART 1**

Inspection date: **September 25, 2007** Date form completed: **September 26, 2007**

Inspection by: **Terry Nelson** Inspection agency: **DEQ NRO**

Time spent: **5 hours** Announced: **Yes**

Reviewed by: Scheduled: **Yes**

Present at inspection: **Doug Frasier; VA DEQ
Susan Horning, Michael Bennet; Motiva Enterprises
John Mittauer; MACTEC Engineering**

TYPE OF FACILITY:

Domestic**Industrial**☐ Federal☐ Major☐ Major☐ Primary☒ Nonfederal☐ Minor☒ Minor☐ Secondary

Type of inspection:

☒ Routine☐ Compliance/Assistance/Complaint☐ ReinspectionDate of last inspection: **August 25, 1999**Agency: **DEQ NRO**Population served: approx. **N/A**Connections served: approx. **One terminal****Outfall 001**

Flow for period April to June 2007 averaged 0.017 MGD with pH between 6.74 and 8.98. All other parameters were below Quantification Levels.

DATA VERIFIED IN PREFACE

☒ Updated ☐ No changes

Has there been any new construction?

☐ Yes☒ No

If yes, were plans and specifications approved?

☐ Yes☐ No☒ NADEQ approval date: **N/A**

(A) PLANT OPERATION AND MAINTENANCE

- | | | | |
|--|---|--|--|
| 1. Class and number of licensed operators: | None required | | |
| 2. Hours per day plant is manned: | City ordinance requires 24 hrs/day, 7 day/week when moving product | | |
| 3. Describe adequacy of staffing. | <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Average | <input type="checkbox"/> Poor |
| 4. Does the plant have an established program for training personnel? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 5. Describe the adequacy of the training program. | <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Average | <input type="checkbox"/> Poor |
| 6. Are preventive maintenance tasks scheduled? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 7. Describe the adequacy of maintenance. | <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Average | <input type="checkbox"/> Poor* |
| 8. Does the plant experience any organic/hydraulic overloading?
If yes, identify cause and impact on plant: | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| 9. Any bypassing since last inspection? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| 10. Is the standby electric generator operational? | <input type="checkbox"/> Yes | <input type="checkbox"/> No* | <input checked="" type="checkbox"/> NA |
| 11. Is the STP alarm system operational? | <input type="checkbox"/> Yes | <input type="checkbox"/> No* | <input checked="" type="checkbox"/> NA |
| 12. How often is the standby generator exercised?
Power Transfer Switch?
Alarm System? | N/A
N/A
N/A | | |
| 13. When was the cross connection control device last tested on the potable water service? | Done by Fairfax County officials | | |
| 14. Is sludge being disposed in accordance with the approved sludge disposal plan? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| 15. Is septage received by the facility? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| Is septage loading controlled? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| Are records maintained? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 16. Overall appearance of facility: | <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Average | <input type="checkbox"/> Poor |

Comments:

- 4. Haz Comm, SPCC, Hazwoper, RCRA, Site Emergency Plan**
9. Oil/water separator can be bypassed during extreme rainfall. No record of such bypass.
14. Sludge is from tank bottoms and oil/water separator.

(B) PLANT RECORDS

1. Which of the following records does the plant maintain?
- | | | | |
|---|---|-----------------------------|--|
| Operational Logs for each unit process | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| Instrument maintenance and calibration | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| Mechanical equipment maintenance | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA |
| Industrial waste contribution
(Municipal Facilities) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> NA |
2. What does the operational log contain?
- | | |
|---|--|
| <input checked="" type="checkbox"/> Visual observations | <input checked="" type="checkbox"/> Flow measurement |
| <input checked="" type="checkbox"/> Laboratory results | <input type="checkbox"/> Process adjustments |
| <input type="checkbox"/> Control calculations | <input type="checkbox"/> Other (specify) |

Comments:

3. What do the mechanical equipment records contain?
- | | |
|--|--|
| <input type="checkbox"/> As built plans and specs | <input type="checkbox"/> Spare parts inventory |
| <input checked="" type="checkbox"/> Manufacturers instructions | <input type="checkbox"/> Equipment/parts suppliers |
| <input type="checkbox"/> Lubrication schedules | <input type="checkbox"/> Other (specify) |

Comments:

4. What do the industrial waste contribution records contain? (Municipal Only)
- | | |
|--|--|
| <input type="checkbox"/> Waste characteristics | <input type="checkbox"/> Locations and discharge types |
| <input type="checkbox"/> Impact on plant | <input type="checkbox"/> Other (specify) |

Comments: **Not Applicable**

5. Which of the following records are kept at the plant and available to personnel?
- | | |
|---|---|
| <input checked="" type="checkbox"/> Equipment maintenance records | <input checked="" type="checkbox"/> Operational Log |
| <input type="checkbox"/> Industrial contributor records | <input checked="" type="checkbox"/> Instrumentation records |
| <input checked="" type="checkbox"/> Sampling and testing records | |

6. Records not normally available to plant personnel and their location:
pH calibration log maintained by MACTEC

7. Were the records reviewed during the inspection? ☒ Yes ☐ No
8. Are the records adequate and the O & M Manual current? ☒ Yes ☐ No
9. Are the records maintained for the required 3-year time period? ☒ Yes ☐ No

Comments:

(C) SAMPLING

1. Do sampling locations appear to be capable of providing representative samples? ☒ Yes ☐ No*
2. Do sample types correspond to those required by the VPDES permit? ☒ Yes ☐ No*
3. Do sampling frequencies correspond to those required by the VPDES permit? ☒ Yes ☐ No*
4. Are composite samples collected in proportion to flow? ☐ Yes ☐ No* ☒ NA
5. Are composite samples refrigerated during collection? ☐ Yes ☐ No* ☒ NA
6. Does plant maintain required records of sampling? ☒ Yes ☐ No*
7. Does plant run operational control tests? ☐ Yes ☐ No ☒ NA

Comments:

(D) TESTING

1. Who performs the testing? ☐ Plant ☐ Central Lab ☒ Commercial Lab
 Name: **EA Labs, Sparks, MD** **Toxicity**
MACTEC, Ashburn, VA, **pH**
Test America, Nashville, TN **TSS, Organics**

If plant performs any testing, complete 2-4.

2. What method is used for chlorine analysis? **N/A (No hydrostatic testing in past 3 years)**
3. Does plant appear to have sufficient equipment to perform required tests? ☐ Yes ☐ No*
4. Does testing equipment appear to be clean and/or operable? ☐ Yes ☐ No*

Comments:

(E) FOR INDUSTRIAL FACILITIES WITH TECHNOLOGY BASED LIMITS ONLY

1. Is the production process as described in the permit application? (If no, describe changes in comments)
☒ Yes ☐ No ☐ NA
2. Do products and production rates correspond as provided in the permit application? (If no, list differences)
☒ Yes ☐ No ☐ NA
3. Has the State been notified of the changes and their impact on plant effluent? Date:
☐ Yes ☐ No* ☒ NA

Comments:

Facility Description

The Motiva Enterprises Springfield Terminal is a fuel storage and distribution facility where petroleum products are received via Plantation Pipeline and distributed to offsite retail stations by truck. The petroleum products are stored in the 10 above ground storage tanks (ASTs) that are located in the diked area of the property. Typical product includes three grades of gasoline, diesel fuel, and aviation fuel. The facility is located at 8206 Terminal Road in Lorton. All stormwater on the site is directed to the main retention pond.

The ASTs are located in a diked area. Above ground piping transports the fuels into the tanks and to the loading rack. Tank bottom waters are hauled offsite for disposal. The dike area has been designed to hold 125% of the largest tank volume. The dike walls are coated with asphalt sealer and were in excellent condition. The floor of the area is graveled and kept clear of weeds. The drain from this area is kept in the closed position and manually opened to release the stormwater to the oil/water separator. There are monitoring wells throughout the dike area.

The truck loading rack is covered and has four bottom-loading racks. The area has a low berm around it and the asphalt slopes to central drains. The drains are connected to the rack sump pit from which the wastewater is pumped to either a 19,000 gallon holding tank or to a water tank to be held until it can be hauled off site for disposal. There are two pumps available to pump to either holding tank: either a two horsepower pump capable of 60 gallons per minute (gpm) or a ten horsepower pump capable of 250 gpm. Additives are mixed into the fuel at the loading racks. The loading rack is equipped with a fire suppression system that is tested annually.

Parking lots and vehicle traffic areas are all paved. Stormwater runoff from these areas is piped to the oil/water separator. During large storm events, sheet flow from the parking area can bypass the separator and flow directly to the pond. There is a sock boom in the pond to collect free product, but at higher flows the sock boom effectiveness is questionable.

The sedimentation pond is surrounded by a fence with a locked gate. Effluent from the O/W Separators and Stormwater sheet flow that bypasses the separators enter the pond on the eastern side. The pond banks are covered with rip rap. The pond is about 5 feet deep and the effluent pipe is about 2 feet above the pond bottom. The average and maximum flow for the discharge are calculated using Washington National Airport rainfall data and equations developed from engineering studies. The effluent flows into a Stormwater culvert that eventually flows to Accotink Creek. The discharge valve is usually locked in the open position.

UNIT PROCESS: Oil/Water Separator

1. Number of units: **1** Number in operation: **1**
2. Type of separator: [☐] Modified septic tank [☒] Commercial Unit [☐] Other
3. Unit sized for adequate detention/floatation: [☒] Yes [☐] No
4. Discharge pipe submerged adequately: [☒] Yes [☐] No
5. Type of oil received: **Mixed petroleum products**
6. Depth of oil: **None**
7. Cleaning frequency: **Annually**
8. Amount of oil recovered at cleaning: **None**
9. Method of disposal: **Pump and haul to treatment facility**
10. Appearance of discharge (visible sheen?): **No discharge during inspection.**

Comments:

- **Separator was cleaned on May 29, 2007.**
- **Contents of separator are sent to holding tank for off-site treatment.**

DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
LABORATORY INSPECTION REPORT

10/01

FACILITY NO: VA0001988	INSPECTION DATE: 09/25/2007	PREVIOUS INSPECTION: 04/13/1999	PREVIOUS EVALUATION: Satisfactory	TIME SPENT: 1 hour
NAME/ADDRESS OF FACILITY: Motiva Enterprises Fairfax 8206 Terminal Road Lorton, VA 22079		FACILITY CLASS: () MAJOR (X) MINOR () SMALL () VPA/NDC	FACILITY TYPE: () MUNICIPAL (X) INDUSTRIAL () FEDERAL () COMMERCIAL LAB	UNANNOUNCED INSPECTION? () YES (X) NO
				FY-SCHEDULED INSPECTION? (X) YES () NO
INSPECTOR(S): Terry Nelson, Doug Frasier		REVIEWERS:	PRESENT AT INSPECTION: Susan Horning, John Mittauer	

LABORATORY EVALUATION	DEFICIENCIES?	
	Yes	No
LABORATORY RECORDS		X
GENERAL SAMPLING & ANALYSIS		X
LABORATORY EQUIPMENT		X
pH ANALYSIS PROCEDURES		X

QUALITY ASSURANCE/QUALITY CONTROL			
Y/N	QUALITY ASSURANCE METHOD	PARAMETERS	FREQUENCY
N	REPLICATE SAMPLES		
N	SPIKED SAMPLES		
Y	STANDARD SAMPLES	pH	Each use
N	SPLIT SAMPLES		
N	SAMPLE BLANKS		
N	OTHER		
N	EPA-DMR QA DATA?	RATING: () No Deficiency () Deficiency () NA	
N	QC SAMPLES PROVIDED?	RATING: () No Deficiency () Deficiency () NA	

LABORATORY RECORDS SECTION

LABORATORY RECORDS INCLUDE THE FOLLOWING:

<input checked="" type="checkbox"/>	SAMPLING DATE	<input checked="" type="checkbox"/>	ANALYSIS DATE	<input type="checkbox"/>	CONT MONITORING CHART
<input checked="" type="checkbox"/>	SAMPLING TIME	<input checked="" type="checkbox"/>	ANALYSIS TIME	<input checked="" type="checkbox"/>	INSTRUMENT CALIBRATION
<input checked="" type="checkbox"/>	SAMPLE LOCATION	<input checked="" type="checkbox"/>	TEST METHOD	<input type="checkbox"/>	INSTRUMENT MAINTENANCE
				<input checked="" type="checkbox"/>	CERTIFICATE OF ANALYSIS

WRITTEN INSTRUCTIONS INCLUDE THE FOLLOWING:

<input type="checkbox"/>	SAMPLING SCHEDULES	<input type="checkbox"/>	CALCULATIONS	<input type="checkbox"/>	ANALYSIS PROCEDURES
--------------------------	--------------------	--------------------------	--------------	--------------------------	---------------------

	YES	NO	N/A
DO ALL ANALYSTS INITIAL THEIR WORK?	<input checked="" type="checkbox"/>		
DO BENCH SHEETS INCLUDE ALL INFORMATION NECESSARY TO DETERMINE RESULTS?	<input checked="" type="checkbox"/>		
IS THE DMR COMPLETE AND CORRECT? MONTH(S) REVIEWED: April - June 2007	<input checked="" type="checkbox"/>		
ARE ALL MONITORING VALUES REQUIRED BY THE PERMIT REPORTED?	<input checked="" type="checkbox"/>		

GENERAL SAMPLING AND ANALYSIS SECTION

	YES	NO	N/A
ARE SAMPLE LOCATION(S) ACCORDING TO PERMIT REQUIREMENTS?	<input checked="" type="checkbox"/>		
ARE SAMPLE COLLECTION PROCEDURES APPROPRIATE?	<input checked="" type="checkbox"/>		
IS SAMPLE EQUIPMENT CONDITION ADEQUATE?	<input checked="" type="checkbox"/>		
IS FLOW MEASUREMENT ACCORDING TO PERMIT REQUIREMENTS?	<input checked="" type="checkbox"/>		
ARE COMPOSITE SAMPLES REPRESENTATIVE OF FLOW?			<input checked="" type="checkbox"/>
ARE SAMPLE HOLDING TIMES AND PRESERVATION ADEQUATE?	<input checked="" type="checkbox"/>		
IF ANALYSIS IS PERFORMED AT ANOTHER LOCATION, ARE SHIPPING PROCEDURES ADEQUATE? LIST PARAMETERS AND NAME & ADDRESS OF LAB: Test America in Nashville, TN analyzed TSS, Organics	<input checked="" type="checkbox"/>		

LABORATORY EQUIPMENT SECTION

	YES	NO	N/A
IS LABORATORY EQUIPMENT IN PROPER OPERATING RANGE?	<input checked="" type="checkbox"/>		
ARE ANNUAL THERMOMETER CALIBRATION(S) ADEQUATE?	<input checked="" type="checkbox"/>		
IS THE LABORATORY GRADE WATER SUPPLY ADEQUATE?			<input checked="" type="checkbox"/>
ARE ANALYTICAL BALANCE(S) ADEQUATE?			<input checked="" type="checkbox"/>

ANALYST:	John Mittauer	VPDES NO	VA0001988
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Parameter: Hydrogen Ion (pH)

Method: Electrometric

08/06

X	18th EDITION STANDARD METHODS -4500-H-B
	EPA METHODS FOR CHEMICAL ANALYSIS -150.1
	ASTM-D1293-84(90)(A or B)
	USGS-METHODS IN WATER AND FLUVIAL SEDIMENTS-I-1586-85

		Y	N
1)	Is the electrode in good condition (no chloride precipitate, etc.)? [SM-2.b/c and 5.b; 150.1-4.3/Permit]	X	
2)	Is electrode storage solution in accordance with manufacturer's instructions? [Mfr.]	X	
3)	Is meter calibrated on at least a daily basis? [SM-4.a; 150.1-8.1]	X	
4)	Are two buffers which bracket the anticipated range of the sample used to calibrate the meter? (For meters not capable of performing a two point calibration is a second buffer which brackets the sample pH analyzed and found to be within ± 0.1 SU of the expected value? [SM-2.a; 150.1-7.2]	X	
5)	Is meter calibration documented? [Permit]	X	
6)	Does meter read within 0.1 SU for the pH of the second buffer solution? [SM-4.a/5.b; 150.1-7.2.1]	X	
7)	After calibration, is a buffer of 7 SU analyzed as a check sample to verify that calibration is correct? Agreement should be within ± 0.1 SU. [Permit]	X	
8)	Do the buffer solutions appear to be free of contamination or growths? [SM-3.a; Permit]	X	
9)	Are buffer solutions within their listed shelf life or have they been prepared within the last 4 weeks? [SM-3.a; 150.1-6.1.1]	X	
10)	Is the cap or sleeve covering the access hole on the reference electrode removed when measuring pH? [Mfr.]	NA	
11)	Is the temperature of buffer solutions and samples measured prior to testing? [SM-1.a; 150.1-9.1]		X
12)	For meters with ATC that also have temperature display, was the thermometer calibrated annually?	X	
13)	Was the electrode rinsed between solutions? [SM-4.a; 150.1-8.4]	X	
14)	Was the electrode blotted dry between solutions (disregard if rinse is next solution)? [SM-4.a; 150.1-8.4]	X	
15)	Is the sample stirred gently at a constant speed during measurement? [SM-4.b; 150.1-8.4]	X	
16)	Does the meter hold a steady reading after reaching equilibrium? [SM-4.b/5 ; 150.1-8.4]	X	

COMMENTS:	12) The meter is recalibrated by manufacturer each year, including temperature.
PROBLEMS:	11) When verifying the calibration curve, please record the temperature of the buffers.



1) Fuel loading rack.



2) Vapor pressure bladder tank.



3) Ethanol off-loading system



4) Maintenance and process control test buildings.



5) Oil water separator.



6) Stormwater pond.

Motiva Springfield Terminal	Permit VA0001988
Photos by Terry Nelson	September 25, 2007
Layout by Terry Nelson	Page 1 of 1

FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: **Motiva Enterprises - Springfield**

Permit No.: **VA0001988**

Receiving Stream: **Accotink Creek, UT**

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO3) =	mg/L
90% Temperature (Annual) =	deg C
90% Temperature (Wet season) =	deg C
90% Maximum pH =	SU
10% Maximum pH =	SU
Tier Designation (1 or 2) =	1
Public Water Supply (PWS) Y/N? =	n
Trout Present Y/N? =	n
Early Life Stages Present Y/N? =	y

Stream Flows

1Q10 (Annual) =	0 MGD
7Q10 (Annual) =	0 MGD
30Q10 (Annual) =	0 MGD
1Q10 (Wet season) =	0 MGD
30Q10 (Wet season) =	0 MGD
30Q5 =	0 MGD
Harmonic Mean =	0 MGD

Mixing Information

Annual - 1Q10 Mix =	100 %
- 7Q10 Mix =	100 %
- 30Q10 Mix =	100 %
Wet Season - 1Q10 Mix =	100 %
- 30Q10 Mix =	100 %

Effluent Information

Mean Hardness (as CaCO3) =	50 mg/L
90% Temp (Annual) =	25 deg C
90% Temp (Wet season) =	deg C
90% Maximum pH =	8 SU
10% Maximum pH =	SU
Discharge Flow =	0.016 MGD

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenaphthene	0	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	--	--	--	--	--	--	--	--	na	9.9E+02
Acrolein	0	--	--	na	9.3E+00	--	--	na	9.3E+00	--	--	--	--	--	--	--	--	--	--	na	9.3E+00
Acrylonitrile ^C	0	--	--	na	2.5E+00	--	--	na	2.5E+00	--	--	--	--	--	--	--	--	--	--	na	2.5E+00
Aldrin ^C	0	3.0E+00	--	na	5.0E-04	3.0E+00	--	na	5.0E-04	--	--	--	--	--	--	--	--	3.0E+00	--	na	5.0E-04
Ammonia-N (mg/l) (Yearly)	0	8.41E+00	1.24E+00	na	--	8.4E+00	1.2E+00	na	--	--	--	--	--	--	--	--	--	8.4E+00	1.2E+00	na	--
Ammonia-N (mg/l) (High Flow)	0	8.41E+00	2.43E+00	na	--	8.4E+00	2.4E+00	na	--	--	--	--	--	--	--	--	--	8.4E+00	2.4E+00	na	--
Anthracene	0	--	--	na	4.0E+04	--	--	na	4.0E+04	--	--	--	--	--	--	--	--	--	--	na	4.0E+04
Antimony	0	--	--	na	6.4E+02	--	--	na	6.4E+02	--	--	--	--	--	--	--	--	--	--	na	6.4E+02
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene ^C	0	--	--	na	5.1E+02	--	--	na	5.1E+02	--	--	--	--	--	--	--	--	--	--	na	5.1E+02
Benzidine ^C	0	--	--	na	2.0E-03	--	--	na	2.0E-03	--	--	--	--	--	--	--	--	--	--	na	2.0E-03
Benzo (a) anthracene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (b) fluoranthene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (k) fluoranthene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (a) pyrene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Bis(2-Chloroethyl) Ether ^C	0	--	--	na	5.3E+00	--	--	na	5.3E+00	--	--	--	--	--	--	--	--	--	--	na	5.3E+00
Bis(2-Chloroisopropyl) Ether	0	--	--	na	6.5E+04	--	--	na	6.5E+04	--	--	--	--	--	--	--	--	--	--	na	6.5E+04
Bis 2-Ethylhexyl Phthalate ^C	0	--	--	na	2.2E+01	--	--	na	2.2E+01	--	--	--	--	--	--	--	--	--	--	na	2.2E+01
Bromoform ^C	0	--	--	na	1.4E+03	--	--	na	1.4E+03	--	--	--	--	--	--	--	--	--	--	na	1.4E+03
Butylbenzylphthalate	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	--	--	--	--	na	1.9E+03
Cadmium	0	1.8E+00	6.6E-01	na	--	1.8E+00	6.6E-01	na	--	--	--	--	--	--	--	--	--	1.8E+00	6.6E-01	na	--
Carbon Tetrachloride ^C	0	--	--	na	1.6E+01	--	--	na	1.6E+01	--	--	--	--	--	--	--	--	--	--	na	1.6E+01
Chlordane ^C	0	2.4E+00	4.3E-03	na	8.1E-03	2.4E+00	4.3E-03	na	8.1E-03	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	na	8.1E-03
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	na	--
Chlorobenzene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane ^C	0	--	--	na	1.3E+02	--	--	na	1.3E+02	--	--	--	--	--	--	--	--	--	--	na	1.3E+02
Chloroform	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	--	--	--	--	--	--	--	--	na	1.1E+04
2-Chloronaphthalene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03
2-Chlorophenol	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	1.5E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	8.3E-02	4.1E-02	na	--
Chromium III	0	3.2E+02	4.2E+01	na	--	3.2E+02	4.2E+01	na	--	--	--	--	--	--	--	--	--	3.2E+02	4.2E+01	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.6E+01	1.1E+01	na	--
Chromium, Total	0	--	--	1.0E+02	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Chrysene ^C	0	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	--	--	--	--	--	--	--	--	na	1.8E-02
Copper	0	7.0E+00	5.0E+00	na	--	7.0E+00	5.0E+00	na	--	--	--	--	--	--	--	--	--	7.0E+00	5.0E+00	na	--
Cyanide, Free	0	2.2E+01	5.2E+00	na	1.6E+04	2.2E+01	5.2E+00	na	1.6E+04	--	--	--	--	--	--	--	--	2.2E+01	5.2E+00	na	1.6E+04
DDD ^C	0	--	--	na	3.1E-03	--	--	na	3.1E-03	--	--	--	--	--	--	--	--	--	--	na	3.1E-03
DDE ^C	0	--	--	na	2.2E-03	--	--	na	2.2E-03	--	--	--	--	--	--	--	--	--	--	na	2.2E-03
DDT ^C	0	1.1E+00	1.0E-03	na	2.2E-03	1.1E+00	1.0E-03	na	2.2E-03	--	--	--	--	--	--	--	--	1.1E+00	1.0E-03	na	2.2E-03
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Diazinon	0	1.7E-01	1.7E-01	na	--	1.7E-01	1.7E-01	na	--	--	--	--	--	--	--	--	--	1.7E-01	1.7E-01	na	--
Dibenz(a,h)anthracene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
1,2-Dichlorobenzene	0	--	--	na	1.3E+03	--	--	na	1.3E+03	--	--	--	--	--	--	--	--	--	--	na	1.3E+03
1,3-Dichlorobenzene	0	--	--	na	9.6E+02	--	--	na	9.6E+02	--	--	--	--	--	--	--	--	--	--	na	9.6E+02
1,4-Dichlorobenzene	0	--	--	na	1.9E+02	--	--	na	1.9E+02	--	--	--	--	--	--	--	--	--	--	na	1.9E+02
3,3-Dichlorobenzidine ^C	0	--	--	na	2.8E-01	--	--	na	2.8E-01	--	--	--	--	--	--	--	--	--	--	na	2.8E-01
Dichlorobromomethane ^C	0	--	--	na	1.7E+02	--	--	na	1.7E+02	--	--	--	--	--	--	--	--	--	--	na	1.7E+02
1,2-Dichloroethane ^C	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	--	--	--	--	--	--	--	--	na	3.7E+02
1,1-Dichloroethylene	0	--	--	na	7.1E+03	--	--	na	7.1E+03	--	--	--	--	--	--	--	--	--	--	na	7.1E+03
1,2-trans-dichloroethylene	0	--	--	na	1.0E+04	--	--	na	1.0E+04	--	--	--	--	--	--	--	--	--	--	na	1.0E+04
2,4-Dichlorophenol	0	--	--	na	2.9E+02	--	--	na	2.9E+02	--	--	--	--	--	--	--	--	--	--	na	2.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,2-Dichloropropane ^C	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	1.5E+02
1,3-Dichloropropene ^C	0	--	--	na	2.1E+02	--	--	na	2.1E+02	--	--	--	--	--	--	--	--	--	--	na	2.1E+02
Dieldrin ^C	0	2.4E-01	5.6E-02	na	5.4E-04	2.4E-01	5.6E-02	na	5.4E-04	--	--	--	--	--	--	--	--	2.4E-01	5.6E-02	na	5.4E-04
Diethyl Phthalate	0	--	--	na	4.4E+04	--	--	na	4.4E+04	--	--	--	--	--	--	--	--	--	--	na	4.4E+04
2,4-Dimethylphenol	0	--	--	na	8.5E+02	--	--	na	8.5E+02	--	--	--	--	--	--	--	--	--	--	na	8.5E+02
Dimethyl Phthalate	0	--	--	na	1.1E+06	--	--	na	1.1E+06	--	--	--	--	--	--	--	--	--	--	na	1.1E+06
Di-n-Butyl Phthalate	0	--	--	na	4.5E+03	--	--	na	4.5E+03	--	--	--	--	--	--	--	--	--	--	na	4.5E+03
2,4 Dinitrophenol	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
2-Methyl-4,6-Dinitrophenol	0	--	--	na	2.8E+02	--	--	na	2.8E+02	--	--	--	--	--	--	--	--	--	--	na	2.8E+02
2,4-Dinitrotoluene ^C	0	--	--	na	3.4E+01	--	--	na	3.4E+01	--	--	--	--	--	--	--	--	--	--	na	3.4E+01
Dioxin 2,3,7,8- tetrachlorodibenzo-p-dioxin	0	--	--	na	5.1E-08	--	--	na	5.1E-08	--	--	--	--	--	--	--	--	--	--	na	5.1E-08
1,2-Diphenylhydrazine ^C	0	--	--	na	2.0E+00	--	--	na	2.0E+00	--	--	--	--	--	--	--	--	--	--	na	2.0E+00
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	8.9E+01
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	8.9E+01
Alpha + Beta Endosulfan	0	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	--	--
Endosulfan Sulfate	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	--	--	na	8.9E+01
Endrin	0	8.6E-02	3.6E-02	na	6.0E-02	8.6E-02	3.6E-02	na	6.0E-02	--	--	--	--	--	--	--	--	8.6E-02	3.6E-02	na	6.0E-02
Endrin Aldehyde	0	--	--	na	3.0E-01	--	--	na	3.0E-01	--	--	--	--	--	--	--	--	--	--	na	3.0E-01

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.1E+03	--	--	na	2.1E+03	--	--	--	--	--	--	--	--	--	--	na	2.1E+03
Fluoranthene	0	--	--	na	1.4E+02	--	--	na	1.4E+02	--	--	--	--	--	--	--	--	--	--	na	1.4E+02
Fluorene	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor ^C	0	5.2E-01	3.8E-03	na	7.9E-04	5.2E-01	3.8E-03	na	7.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	7.9E-04
Heptachlor Epoxide ^C	0	5.2E-01	3.8E-03	na	3.9E-04	5.2E-01	3.8E-03	na	3.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	3.9E-04
Hexachlorobenzene ^C	0	--	--	na	2.9E-03	--	--	na	2.9E-03	--	--	--	--	--	--	--	--	--	--	na	2.9E-03
Hexachlorobutadiene ^C	0	--	--	na	1.8E+02	--	--	na	1.8E+02	--	--	--	--	--	--	--	--	--	--	na	1.8E+02
Hexachlorocyclohexane																					
Alpha-BHC ^C	0	--	--	na	4.9E-02	--	--	na	4.9E-02	--	--	--	--	--	--	--	--	--	--	na	4.9E-02
Hexachlorocyclohexane																					
Beta-BHC ^C	0	--	--	na	1.7E-01	--	--	na	1.7E-01	--	--	--	--	--	--	--	--	--	--	na	1.7E-01
Hexachlorocyclohexane																					
Gamma-BHC ^C (Lindane)	0	9.5E-01	na	na	1.8E+00	9.5E-01	--	na	1.8E+00	--	--	--	--	--	--	--	--	9.5E-01	--	na	1.8E+00
Hexachlorocyclopentadiene	0	--	--	na	1.1E+03	--	--	na	1.1E+03	--	--	--	--	--	--	--	--	--	--	na	1.1E+03
Hexachloroethane ^C	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	--	--	na	3.3E+01
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Indeno (1,2,3-cd) pyrene ^C	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Iron	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Isophorone ^C	0	--	--	na	9.6E+03	--	--	na	9.6E+03	--	--	--	--	--	--	--	--	--	--	na	9.6E+03
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Lead	0	4.9E+01	5.6E+00	na	--	4.9E+01	5.6E+00	na	--	--	--	--	--	--	--	--	--	4.9E+01	5.6E+00	na	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	--	--	1.4E+00	7.7E-01	--	--	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	--	--
Methyl Bromide	0	--	--	na	1.5E+03	--	--	na	1.5E+03	--	--	--	--	--	--	--	--	--	--	na	1.5E+03
Methylene Chloride ^C	0	--	--	na	5.9E+03	--	--	na	5.9E+03	--	--	--	--	--	--	--	--	--	--	na	5.9E+03
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Nickel	0	1.0E+02	1.1E+01	na	4.6E+03	1.0E+02	1.1E+01	na	4.6E+03	--	--	--	--	--	--	--	--	1.0E+02	1.1E+01	na	4.6E+03
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrobenzene	0	--	--	na	6.9E+02	--	--	na	6.9E+02	--	--	--	--	--	--	--	--	--	--	na	6.9E+02
N-Nitrosodimethylamine ^C	0	--	--	na	3.0E+01	--	--	na	3.0E+01	--	--	--	--	--	--	--	--	--	--	na	3.0E+01
N-Nitrosodiphenylamine ^C	0	--	--	na	6.0E+01	--	--	na	6.0E+01	--	--	--	--	--	--	--	--	--	--	na	6.0E+01
N-Nitrosodi-n-propylamine ^C	0	--	--	na	5.1E+00	--	--	na	5.1E+00	--	--	--	--	--	--	--	--	--	--	na	5.1E+00
Nonylphenol	0	2.8E+01	6.6E+00	--	--	2.8E+01	6.6E+00	na	--	--	--	--	--	--	--	--	--	2.8E+01	6.6E+00	na	--
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
PCB Total ^C	0	--	1.4E-02	na	6.4E-04	--	1.4E-02	na	6.4E-04	--	--	--	--	--	--	--	--	--	1.4E-02	na	6.4E-04
Pentachlorophenol ^C	0	7.7E-03	5.9E-03	na	3.0E+01	7.7E-03	5.9E-03	na	3.0E+01	--	--	--	--	--	--	--	--	7.7E-03	5.9E-03	na	3.0E+01
Phenol	0	--	--	na	8.6E+05	--	--	na	8.6E+05	--	--	--	--	--	--	--	--	--	--	na	8.6E+05
Pyrene	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	na	4.0E+03
Radionuclides	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Gross Alpha Activity (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Beta and Photon Activity (mrem/yr)	0	--	--	na	4.0E+00	--	--	na	4.0E+00	--	--	--	--	--	--	--	--	--	--	na	4.0E+00
Radium 226 + 228 (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Uranium (ug/l)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Selenium, Total Recoverable	0	2.0E+01	5.0E+00	na	4.2E+03	2.0E+01	5.0E+00	na	4.2E+03	--	--	--	--	--	--	--	--	2.0E+01	5.0E+00	na	4.2E+03
Silver	0	1.0E+00	--	na	--	1.0E+00	--	na	--	--	--	--	--	--	--	--	--	1.0E+00	--	na	--
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,1,2,2-Tetrachloroethane ^C	0	--	--	na	4.0E+01	--	--	na	4.0E+01	--	--	--	--	--	--	--	--	--	--	na	4.0E+01
Tetrachloroethylene ^C	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	--	--	na	3.3E+01
Thallium	0	--	--	na	4.7E-01	--	--	na	4.7E-01	--	--	--	--	--	--	--	--	--	--	na	4.7E-01
Toluene	0	--	--	na	6.0E+03	--	--	na	6.0E+03	--	--	--	--	--	--	--	--	--	--	na	6.0E+03
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Toxaphene ^C	0	7.3E-01	2.0E-04	na	2.8E-03	7.3E-01	2.0E-04	na	2.8E-03	--	--	--	--	--	--	--	--	7.3E-01	2.0E-04	na	2.8E-03
Tributyltin	0	4.6E-01	7.2E-02	na	--	4.6E-01	7.2E-02	na	--	--	--	--	--	--	--	--	--	4.6E-01	7.2E-02	na	--
1,2,4-Trichlorobenzene	0	--	--	na	7.0E+01	--	--	na	7.0E+01	--	--	--	--	--	--	--	--	--	--	na	7.0E+01
1,1,2-Trichloroethane ^C	0	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	--	--	--	--	--	--	--	--	na	1.6E+02
Trichloroethylene ^C	0	--	--	na	3.0E+02	--	--	na	3.0E+02	--	--	--	--	--	--	--	--	--	--	na	3.0E+02
2,4,6-Trichlorophenol ^C	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	--	--	na	2.4E+01
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Vinyl Chloride ^C	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	--	--	na	2.4E+01
Zinc	0	6.5E+01	6.6E+01	na	2.6E+04	6.5E+01	6.6E+01	na	2.6E+04	--	--	--	--	--	--	--	--	6.5E+01	6.6E+01	na	2.6E+04

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
- Metals measured as Dissolved, unless specified otherwise
- "C" indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
Antidegradation WLAs are based upon a complete mix.
- Antideg. Baseline = $(0.25(WQC - \text{background conc.}) + \text{background conc.})$ for acute and chronic
= $(0.1(WQC - \text{background conc.}) + \text{background conc.})$ for human health
- WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

Metal	Target Value (SSTV)
Antimony	6.4E+02
Arsenic	9.0E+01
Barium	na
Cadmium	3.9E-01
Chromium III	2.5E+01
Chromium VI	6.4E+00
Copper	2.8E+00
Iron	na
Lead	3.4E+00
Manganese	na
Mercury	4.6E-01
Nickel	6.8E+00
Selenium	3.0E+00
Silver	4.2E-01
Zinc	2.6E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

1/21/2010 11:07:40 AM

Facility = Motiva Enterprises - Springfield

Chemical = Chlorine

Chronic averaging period = 4

WLAa = 0.019

WLAc = 0.011

Q.L. = 0.1

samples/mo. = 1

samples/wk. = 1

Summary of Statistics:

observations = 1

Expected Value = 20

Variance = 144

C.V. = 0.6

97th percentile daily values = 48.6683

97th percentile 4 day average = 33.2758

97th percentile 30 day average = 24.1210

< Q.L. = 0

Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity

Maximum Daily Limit = 1.60883226245855E-02

Average Weekly limit = 1.60883226245855E-02

Average Monthly Limit = 1.60883226245855E-02

The data are:

1/21/2010 11:50:56 AM

Facility = Motiva Enterprises - Springfield

Chemical = Zinc

Chronic averaging period = 4

WLAa = 65

WLAc = 66

Q.L. = 15

samples/mo. = 1

samples/wk. = 1

Summary of Statistics:

observations = 5

Expected Value = 20.1307

Variance = 145.889

C.V. = 0.6

97th percentile daily values = 48.9866

97th percentile 4 day average = 33.4934

97th percentile 30 day average = 24.2788

< Q.L. = 2

Model used = BPJ Assumptions, Type 1 data

No Limit is required for this material

The data are:

70

30

81

0

0

BIOMONITORING RESULTS
Motiva Springfield Terminal (01988)

Table 1
Summary of Toxicity Test Results for Outfall 001

TEST DATE	TEST TYPE/ORGANISM	48-H LC ₅₀ (%)	% SURV	NOAEC (%)	TUa	REMARKS
01/08/93	Acute <i>D. pulex</i>	>100	100			
01/07/94	Acute <i>D. pulex</i>	>100	100			
12/21/94	Acute <i>C. dubia</i>	>100	100			
12/06/95	Acute <i>C. dubia</i>	>100	100			
12/03/96	Acute <i>C. dubia</i>	INV.				
12/12/96	Acute <i>C. dubia</i>	< 10	0			
03/11/97	Acute <i>C. dubia</i>	>100	100			
11/25/97	Acute <i>C. dubia</i>	>100	100			
12/9/98	Acute <i>C. dubia</i>	>100	100			
Permit Reissued March 27, 2000						
5/18/00	Acute <i>C. dubia</i>	>100	100			1st annual
05/23/01	Acute <i>C. dubia</i>	>100	100			2nd annual wrong species
10/16/01	Acute <i>P. promelas</i>	>100	95			Retest
05/02/02	Acute <i>C. dubia</i>	>100	100			3rd annual
05/02/03	Acute <i>P. promelas</i>	>100	100			4th annual
05/05/04	Acute <i>C. dubia</i>	>100	100			5th annual
Permit Reissued March 28, 2005						
06/03/05	Acute <i>P. promelas</i>	>100	100	100	1	1 st annual
06/13/06	Acute <i>C. dubia</i>	>100	100	100	1	2 nd annual
08/08/07	Acute <i>P. promelas</i>	>100	100	100	1	3 rd annual
05/07/08	Acute <i>C. dubia</i>	>100	100	100	1	4 th annual

ABBREVIATIONS:

% SURV – Percent survival in 100% effluent

INV - Invalid

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of industrial stormwater into a water body in Fairfax County, Virginia.

PUBLIC COMMENT PERIOD: TBD, 2010 to 5:00 p.m. on TBD, 2010

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Stormwater issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Motiva Enterprises LLC
8206 Terminal Road, Lorton, VA 22079
VA0001988

NAME AND ADDRESS OF FACILITY: Motiva – Springfield Terminal
8206 Terminal Road, Lorton, VA 22079

PROJECT DESCRIPTION: Motiva Enterprises LLC has applied for a reissuance of a permit for the private Motiva – Springfield Terminal. The applicant proposes to release industrial storm water at a rate of 0.0565 million gallons per day into a water body. There is no sludge generated at this facility. The facility proposes to release the storm water in the Accotink Creek, UT in Fairfax County in the Potomac River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: TSS, TPH, BTEX, pH, Naphthalene, Ethanol, MTBE and Chlorine.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the documents at the DEQ-Northern Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.

Name: Douglas Frasier
Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193
Phone: (703) 583-3873 E-mail: Douglas.Frasier@deq.virginia.gov Fax: (703) 583-3821

Revised 2/2003

**State “Transmittal Checklist” to Assist in Targeting
Municipal and Industrial Individual NPDES Draft Permits for Review**

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	Motiva – Springfield Terminal
NPDES Permit Number:	VA0001988
Permit Writer Name:	Douglas Frasier
Date:	22 January 2010

Major ☐

Minor ☒

Industrial ☒

Municipal ☐

I.A. Draft Permit Package Submittal Includes:

	Yes	No	N/A
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?	X		
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?			X
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?			X
8. Whole Effluent Toxicity Test summary and analysis?	X		
9. Permit Rating Sheet for new or modified industrial facilities?	X		

I.B. Permit/Facility Characteristics

	Yes	No	N/A
1. Is this a new or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet or permit contain a description of the wastewater treatment process?	X		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet or permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water? DOWNSTREAM			X
a. Has a TMDL been developed and approved by EPA for the impaired water?			X
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?	X		
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water? DOWNSTREAM		X	
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?	X		
10. Does the permit authorize discharges of storm water?	X		

I.B. Permit/Facility Characteristics – cont.	Yes	No	N/A
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?	X		
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals (To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether “antibacksliding” provisions were met for any limits that are less stringent than those in the previous NPDES permit?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?		X	
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			X
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?	X		
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a “reasonable measure of ACTUAL production” for the facility (not design)?			X
5. Does the permit contain “tiered” limits that reflect projected increases in production or flow?		X	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			X
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?		X	
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?			X
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a “reasonable potential” evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the “reasonable potential” evaluation was performed in accordance with the State’s approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			X

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have “reasonable potential”?	X		
d. Does the fact sheet indicate that the “reasonable potential” and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?			X
e. Does the permit contain numeric effluent limits for all pollutants for which “reasonable potential” was determined?	X		
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?		X	
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the fact sheet indicate that an “antidegradation” review was performed in accordance with the State’s approved antidegradation policy?	X		

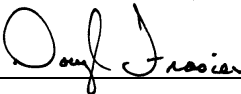
II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?		X	
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State’s standard practices?	X		

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?	X		
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?	X		
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		

II.G. Standard Conditions	Yes	No	N/A
1. Does the permit contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		
List of Standard Conditions – 40 CFR 122.41			
Duty to comply	Property rights	Reporting Requirements	
Duty to reapply	Duty to provide information	Planned change	
Need to halt or reduce activity	Inspections and entry	Anticipated noncompliance	
not a defense	Monitoring and records	Transfers	
Duty to mitigate	Signatory requirement	Monitoring reports	
Proper O & M	Bypass	Compliance schedules	
Permit actions	Upset	24-Hour reporting	
		Other non-compliance	
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?	X		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	<u>Douglas Frasier</u>
Title	<u>Environmental Specialist II Senior II</u>
Signature	<u></u>
Date	<u>25 January 2010</u>